

### **Amendments to the Claims**

This listing of claims will replace all prior versions and listings of claims in this application:

### **Listing of Claims**

Claims 1–36 (canceled)

Claim 37 (currently amended): A method of processing sulfide minerals and concentrates by oxidation of sulfide minerals in an aqueous medium using an oxidizing agent which is one ~~ore~~ or more of nitric acid, nitrous acid and their oxides, the method comprising:

subjecting in an oxidation reactor a slurry containing the sulfide minerals to oxidation under agitation and under controlled conditions of slurry acidity, ~~wherein~~ oxidation of the sulfide minerals is performed using the oxidizing agent which is one [[ore]] or more of nitric acid, nitrous acid and their oxides ~~and is realized under agitation~~;

forming in the oxidation reactor a sulphuric sulfuric acid as a result of the sulfide oxidation [[and]];:

constantly neutralizing the sulphuric sulfuric acid using an acidity neutralizer to an acidity level at which no formation of elementary sulfur occurs;

removing of heat released during the sulfide oxidation from [[an]] the oxidation reactor in which:

transferring NO from the oxidation reactor into a regeneration oxidizer;  
regenerating N<sub>2</sub>O<sub>3</sub> from the transferred NO using air or oxygen in the  
regeneration oxidizer; and

transferring the regenerated N<sub>2</sub>O<sub>3</sub> into the oxidation reactor;  
wherein the temperature in the oxidation reactor is maintained in a range from 20  
to 90 °C and

in which wherein a liquid-to-solid ratio in the slurry in the oxidation reactor is between 1:1 to 5:1.

Claim 38 (previously presented): The method according to claim 37 in which the acidity neutralizer is one or more of CaCO<sub>3</sub>, MgCO<sub>3</sub>, Ca(OH)<sub>2</sub>, CaO, NaOH and CaHPO<sub>4</sub>.

Claim 39 (previously presented): The method according to claim 37 in which the temperature is maintained in the range of 65-85°C.

Claim 40 (currently amended): The method according to claim 37, further comprising separating ~~nitrogen oxides~~ the N<sub>2</sub>O<sub>3</sub>, formed in said method, from ~~inert nitrogen in the air~~ N<sub>2</sub> by absorbing the ~~nitrogen oxides in~~ N<sub>2</sub>O<sub>3</sub> from a mix of gases comprising N<sub>2</sub> and N<sub>2</sub>O<sub>3</sub> into a sulfuric acid solution which has a concentration in the range 75-98%; and

denitrating the sulfuric acid solution thermally by heating it to a temperature not exceeding 250°C, and/or chemically by introduction of a denitrating substance.

Claim 41 (previously presented): The method according to claim 40, in which the denitrating substance is one or more of an alcohol, formaldehyde and other chemical reducing agents.

Claim 42 (currently amended): The method according to claim [[39]] 37, further including comprising

separating the ~~nitrogen oxides~~ NO, formed in said method, from ~~inert nitrogen in the air~~ N<sub>2</sub> by absorbing the ~~nitrogen oxides in~~ NO from a mix of gases comprising N<sub>2</sub> and NO into a monovalent copper salt solution;

denitrating the monovalent copper salt solution using a dosed supply of compressed air, with [[the]] optional simultaneous heating of the solution.

Claim 43 (previously presented): The method according to claim 42 in which the monovalent copper salt solution contains a stabilizing agent to impede oxidation of copper from monovalent to bivalent.

Claim 44 (currently amended): The method according to claim 43 in which the stabilizing agent is one or more of tributyl phosphate, adipodinitrile, or reducing agents such as formaldehyde or hydrazine.

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Claim 45 (canceled)

Claim 46 (currently amended): The method according to claim 37, ~~further comprising~~  
~~wherein the regenerating a dinitrogen trioxide the N<sub>2</sub>O<sub>3</sub> from a nitric oxide the NO~~  
formed in said method is performed using pure oxygen in an individual regeneration  
oxidizer and at a temperature of 15-25°C, ~~so as to prevent the accumulation of nitric acid~~  
~~in the slurry.~~